

CLAIMS

We claim:

1. A latch assembly for closing a door or window opening to a fixed frame having a longitudinal extent at multiple locations distributed along said extent with a single latching movement, said assembly comprising a longitudinally extended keeper having at least three apertures in distributed, longitudinally spaced array, said keeper being mounted to one side of said opening, a cooperating longitudinally extended latch structure comprising a longitudinally shiftable carrier carrying a corresponding number of distributed latch pins selectively engageable with said apertures, *respective pairs of said apertures and pins being relatively coaxially disposed and opposed across said opening in the open and closed condition of said door or window*, a carrier shifting guide, said latch structure being mounted to the other side of said opening in keeper opposed relation, and an actuator for shifting said carrier and latch pins along said carrier guide between engaged and nonengaged conditions of said latch pins with said apertures.

2. The latch assembly according to claim 1, in which said keeper comprises a keeper bar mountable to said opening one side, said keeper bar having a center section, said apertures being formed in said keeper center section to receive said latch pins in keeper center section passing relation, said apertures being cam-shaped to receive and retain said latch pins as a function of longitudinally shifting of said latch pins within said apertures.

3. The latch assembly according to claim 1, in which latch structure comprises a latch bar mountable to said opening other side, said latch bar having a center section flanked by exterior flanges that are attached to said opening 5 other side, said latch structure center section defining a slot opposite each said latch pin for longitudinal movement of latch pins.

4. The latch assembly according to claim 1, in which said latch structure comprises a latch bar mountable to said opening other side, said latch bar having a center section and forming a guideway that receives said carrier in 10 sliding relation.

5. The latch assembly according to claim 1, in which said carrier is spring biased against latch pin engagement with said apertures, said actuator 15 locking said latch pins into aperture engagement against said spring bias.

6. The latch assembly according to claim 1, in which said latch structure further comprises a plurality of guide pins, said keeper defining a corresponding plurality of guide pin receivers distributed between said apertures 20 for aligning said keeper and latch structure in the closed condition of said door or window.

7. The latch assembly according to claim 1, in which said actuator comprises a hand-operated lever and a lever-operated tongue that engages with said carrier in latch pin shifting relation.

5 8. In combination: the latch assembly according to claim 1 and a window or door and cooperating frame.

9. The combination according to claim 9, in which one or more of said window, door and frame is made of plastic.

10 10. A latch assembly for closing through a plane a movable door or window opening panel having a leading edge to an opposing edge of a fixed frame having a longitudinal extent at multiple locations distributed along said extent with a single latching movement, said assembly comprising a 15 longitudinally extended keeper attached to said panel leading edge and having at least three apertures in distributed longitudinally spaced array, a cooperating longitudinally extended latch structure comprising a longitudinally shiftable carrier attached to said opposing edge and carrying a corresponding number of distributed latch pins selectively engageable with said apertures, *respective pairs 20 of said apertures and pins being relatively coaxially disposed and opposed within said plane in the open and closed condition of said door or window, and a carrier shifting guide, and a hand operable actuator for shifting said carrier and latch*

pins along said carrier guide between engaged and nonengaged conditions of said latch pins with said apertures.

11. The latch assembly according to claim 10, in which latch structure
5 comprises a latch bar mountable to said leading edge, said latch bar having a raised center section flanked by exterior flanges that are attached to said leading edge, said latch structure center section defining a slot opposite each said latch pin for longitudinal movement of latch pins.

10 12. The latch assembly according to claim 10, in which said latch structure said center section defines opposed interior flanges, said interior flanges forming a guideway within said center section that receives said carrier in sliding relation.

15 13. The latch assembly according to claim 11, in which said carrier is spring biased against disposing said latch pins for engagement with said apertures, said actuator locking said latch pins disposed for aperture engagement against said spring bias.

20 14. The latch assembly according to claim 13, in which said latch structure further comprises a plurality of guide pins, said keeper defining a corresponding plurality of guide pin receivers distributed between said apertures

for aligning said keeper and latch structure in the closed condition of said door or window.

15. The latch assembly according to claim 13, in which said actuator
5 comprises a lever and a lever operated tongue that engages with said carrier in
latch pin shifting relation against said spring bias.

16. In combination: the latch assembly according to claim 10 and said
window or door panel and said frame.

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17. In combination: the latch assembly according to claim 15 and said
window or door panel and said frame.

18. The combination according to claim 16, in which said window or
15 door and said frame is made of plastic.

19. A latch assembly for closing a movable plastic door or window
panel to a frame in an opening having a fixed side defined by said frame and a
movable side defined by said plastic window or door panel at multiple locations
20 distributed along the frame and panel longitudinal extents with a single latching
movement, said assembly comprising a longitudinally extended metal keeper
having at least three apertures in distributed longitudinally spaced array, said
keeper being mounted to said movable side of said opening, a cooperating

longitudinally extended metal latch structure comprising a longitudinally shiftable metal carrier carrying a corresponding number of distributed metal latch pins selectively engageable with said apertures and a metal carrier shifting guide, said latch structure being mounted to said opening fixed side in keeper opposed 5 relation, *respective pairs of said apertures and metal latch pins being relatively coaxially disposed and opposed across said opening in the open and closed condition of said door or window*, and a hand operable actuator for shifting said carrier and latch pins along said carrier guide between engaged and nonengaged conditions of said latch pins with said apertures.

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20. The latch assembly according to claim 19, in which said apertures are keyhole-shaped to receive said metal latch pins in alternate coaxial positions. and retain said metal latch pins as a function of longitudinally shifting of said latch pins within said apertures.